

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF NEW YORK

INTEGRATED LINER TECHNOLOGIES,
INC.,

Plaintiff,

Civil Action No.

1:09-CV-1285 (GLS/DEP)

v.

SPECIALITY SILICONE PRODUCTS, INC.
and SSP, INC.,

Defendants.

APPEARANCES:

OF COUNSEL:

FOR PLAINTIFF:

HESLIN, ROTHENBERG LAW FIRM
5 Columbia Circle
Albany, NY 12203

DAVID P. MIRANDA, ESQ.
BRETT M. HUTTON, ESQ.

FOR DEFENDANTS:

CERMAK, KENEALY LAW FIRM
515 East Braddock Road
Suite B
Alexandria, VA 22314

AJIT J. VAIDYA, ESQ.

STOCKLI, GREENE LAW FIRM
90 State Street
Albany, NY 12207

MARY ELIZABETH SLEVIN, ESQ.

DAVID E. PEEBLES
U.S. MAGISTRATE JUDGE

REPORT AND RECOMMENDATION

Plaintiff Integrated Liner Technologies, Inc. (“ILT”), an Albany, New York based commercial manufacturer of caps for use to seal containers designed primarily to house liquid medial or scientific samples for testing, has commenced this patent infringement suit against defendants Speciality Silicone Products, Inc. and SSP, Inc. (collectively, “SSP”), both of which are headquartered in Ballston Spa, New York and together compete with ILT.¹ At issue in the action are two related patents, a product patent and a method patent, both of which concern open-top caps with elastomer septums bonded to the caps on the underside surface.

At the direction of the court the parties conferred and were able to agree on the construction of certain of the terms contained within the claims of the two patents in suit. Despite those efforts, however, four claim terms remain in dispute, and the parties have requested the court’s assistance in construing those four terms. In light of that request, District Judge Gary L. Sharpe has referred the matter to me for issuance of a

¹ Plaintiff’s complaint also named a third defendant, Streck, Inc. Subsequent to commencement of the action, however, plaintiff filed a notice of voluntary dismissal of claims against that defendant, without prejudice, pursuant to Rule 41(a)(1) of the Federal Rules of Civil Procedure. See Dkt. Nos. 15, 16.

report and recommendation regarding claim construction. The following constitutes my reported findings and recommendations, which are based upon comprehensive submissions from the parties and a claim construction hearing that was conducted on February 15, 2011.

I. BACKGROUND

At issue in this case are two patents, both of which list Alan R. Gee, William R. Delaney, and Paul M. Petrosino as inventors and have been assigned to ILT. The patents in suit relate to construction of a cap designed to allow the deposit and withdrawal of a sample into a bottle, vial, or other similar type container by way of a needle inserted through the septum of the cap. The two patents are related, and both trace their roots to a patent application filed on December 5, 1994. The specifications and drawings contained in both patents are virtually identical.

The technology disclosed in the two patents encompasses the bonding of an elastomer, such as a silicone rubber, to the inside surface of an inert plastic or metal cap without use of an adhesive or other substance potentially capable of contaminating any samples to be held in the vessel. The first of those patents, No. 5,647,939 (the “939 Patent”),

was issued by the United States Patent and Trademark Office (“PTO”) on July 15, 1997 and is entitled “Method of Bonding a Cured Elastomer to Plastic and Metal Surfaces”. The second, No. 6,234,335 (the “’335 Patent”), was issued on May 22, 2001 and is entitled “Sealable Container and Open Top Cap with Directly Bonded Elastomer Septum”. The caps associated with ILT’s patented technology are depicted in figures 1 (top view) and 1A (cross section) of the ’939 and ’335 Patents, as follows:

FIG. 1

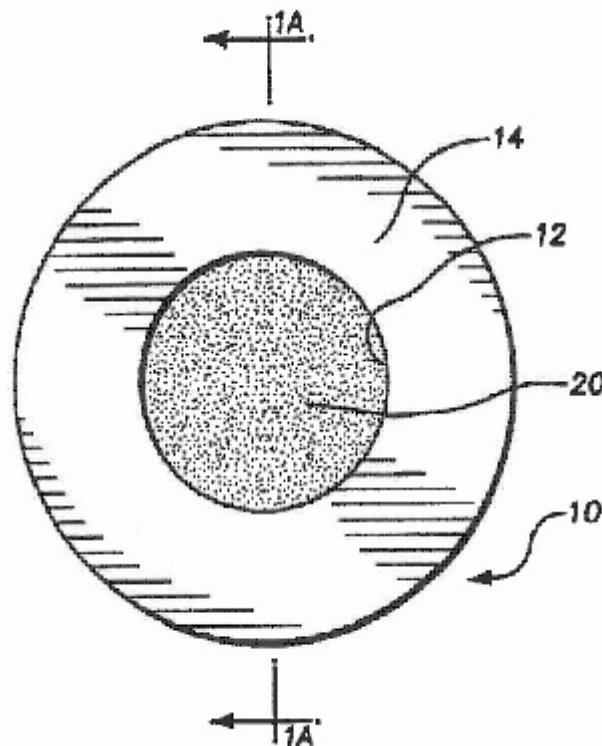
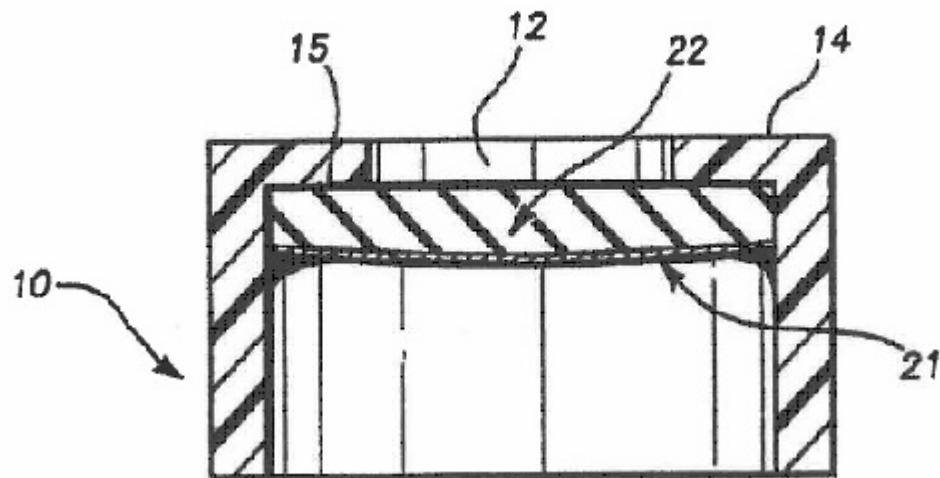


FIG. 1A

The '939 Patent discloses a method of securing an elastomer to a plastic or metal cap, teaching a method of bonding which entails ionization of the two surfaces to be bonded – the elastomer and the inner surface of the plastic or metal cap – and applying pressure to form a direct bond between the two surfaces. '939 Patent at 1:6-7; *see also id.* at 2:52-65. According to the patent, the required ionization can be accomplished through a variety of methods, including by treatment “with a flame, corona or plasma discharge as well as by radiation or high intensity UV light.” *Id.* at 2:66-67. The '335 Patent, the sister product patent, describes the finished cap resulting from use of the ionization bonding method disclosed

in the '939 Patent.

II. DISCUSSION

A. Defendants' Motion To Strike

Before addressing the issue of claim construction, as a preliminary matter I must first consider a motion by SSP to strike portions of a declaration offered by ILT's expert, Patrick T. Mather, Ph. D. Dr. Mather did not offer opinions in support of plaintiff's opening *Markman*² brief. He did, however, provide a declaration in response to defendants' opening submission. See Dkt. No. 49-1. In its motion, SSP asserts that certain portions of that declaration set forth opinions that are not strictly limited to rebutting opinions offered by SSP's expert, R. J. Del Vecchio, and therefore should have been disclosed as part of ILT's initial submission. Dkt. No. 45-3.

The protocol for identifying disputed claim terms and presenting the parties' positions regarding those terms to the court was specified in an order issued on September 17, 2010. Dkt. No. 43. That order required, *inter alia*, the simultaneous exchange of proposed constructions of any disputed term,

² *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370, 116 S. Ct. (1996).

together with an identification of all references from the intrinsic evidence that supports that construction, and the identification of any extrinsic evidence known to the party on which it intends to rely either to support its proposed construction or to oppose the other party's proposed construction, including but not limited to, as permitted by law, dictionary definitions, citations to authoritative treatises and prior art, and testimony of all witnesses including experts.

September 17, 2010 Order (Dkt. No. 43) ¶ 6 (Emphasis added). The procedures specified envisioned an orderly presentation of the parties' positions to the court.

Plaintiff's initial *Markman* submission included various items of extrinsic evidence, but did not incorporate an expert declaration. See Dkt. No. 46. Defendants' initial offering, in contrast, did contain a declaration in which their expert offered opinions concerning the four patent claim terms in issue. Dkt. No. 45-3. Under the guise of rebutting that declaration, ILT later submitted to the court a declaration from Dr. Mather, its expert. Dkt. No. 49-1.

Upon review of Dr. Mather's declaration, I find that certain portions set forth opinions that could appropriately be viewed as rebutting those of defendants' expert. Many of Dr. Mather's views, however, are not and should have been disclosed with plaintiff's opening submission. For this

reason, I will recommend that paragraphs 23, 26, 28, 33, 34, and 36 of the Mather Declaration be stricken. *Vona v. Schindler Elevator Corp. Mgmt.*, No. 05-CV-0131, 2009 WL 2152309, *7-8 (W.D.N.Y. Jul. 14, 2009); see also *Oceans Cuisine, Ltd. v. Fishery Products Int'l, Inc.*, No. 05-CV-3613, 2006 WL 1071578, at *5-6 (E.D.N.Y. Apr. 21, 2006).

B. Claim Terms In Dispute

ILT alleges the defendants infringed eighteen of the twenty-one claims contained within the '335 patent and nineteen of twenty-four claims of the '939 Patent. Claim one of the '335 Patent serves as a useful backdrop for analysis of the parties' claim construction dispute. That portion of the '335 Patent claims:

1. A sealing element comprising:

a cap having a top with an opening therein; and
a septum formed separately from said cap and
comprising an elastomer, the elastomer having an
ionized bonding surface directly bonded to an
ionized interior surface of said cap thereby
occluding the opening in said top and wherein
there is no layer of adhesive or plastic material
between said bonding surface and said interior
surface.

'335 Patent, Claim 1. The method corresponding to that product is described in claim 1 of the '935 Patent. Certain of the subsequent

dependent claims in both patents provide for the addition of a primer to the interior cap surface prior to bonding. See, e.g., '335 Patent, Claims 4-7; '939 Patent Claims 3-6.

As a pre-cursor to adjudication of the various infringement claims and defenses raised in the action, the parties have conferred and settled on definitions to be applied to certain claim terms within the two patents, including “in contact”, “intervening layer”, and “cured elastomer”/“elastomer”. They differ, however, as to the proper definitions to be attributed to the terms “primer”, “adhesive”, “bond directly”/“directly bonded”, and “layer”.

C. Claim Construction: Legal Framework

Patent claim construction represents an issue of law to be decided by the court. *Markman*, 52 F.3d at 979; *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1304 (Fed. Cir. 1999) (citing *Markman*). When engaged in patent construction, a court must define claim terms as one of ordinary skill in the relevant art would understand and interpret them in the context of the entire patent, including the specification. *Markman*, 52 F.3d at 986; see also *Netcraft Corp. v. eBay, Inc.*, 549 F.3d 1394, 1396-97 (Fed. Cir. 2008); *K-2 Corp. v. Salomon S.A.*, 191 F.3d

1356, 1365 (Fed. Cir. 1999).

1. General Claim Construction Principles

Perhaps the most comprehensive discourse to date regarding the claim construction calculus is found in the Federal Circuit's *en banc* decision in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005), *cert. denied*, 546 U.S. 1170, 126 S. Ct. 1332 (2006). In *Phillips*, though with extensive illuminating discussion regarding the relative importance of intrinsic and extrinsic evidence, the Federal Circuit in essence endorsed its earlier decision in *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996), previously regarded by the courts and patent practitioners as defining the contours of the claim construction inquiry. *Phillips*, 415 F.3d at 1324.

The principal teaching of *Phillips* – and not a significant departure from earlier claim construction jurisprudence – is that the claims of a patent define the scope of protection afforded to the inventor. *Phillips*, 415 F.3d at 1312. It therefore follows that the language of a claim itself generally provides the most definitive source of enlightenment concerning the intended meaning of disputed terms. *Vitronics*, 90 F.3d at 1582. Words contained within a patent normally should be given their ordinary

and customary meaning, considered from the perspective of a person of ordinary skill in the art in question at the time of the invention – that is, the effective filing date of the patent application. *Phillips*, 415 F.3d at 1313 (citing, *inter alia*, *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).

While it is true that the words of a patent claim will generally control, they should not be interpreted in isolation, in disregard of other portions of the patent; instead “the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1313. In this regard a patent specification, which some liken to an internal dictionary, must be carefully reviewed to determine whether, for example, the inventor has used a particular term in a manner inconsistent with its ordinary meaning. *Id.* at 1313-14; see also *Vitronics*, 90 F.3d at 1582 (citing *Markman*, 52 F.3d at 979).

A patent’s specification often constitutes the “single best guide to the meaning of a disputed term.” *Vitronics*, 90 F.3d at 1582. When resorting to a patent’s specification for guidance with respect to disputed

claim terms one must consider it as a whole, and all portions should be read in a manner that renders the patent internally consistent. *Budde v. Harley-Davidson, Inc.*, 250 F.3d 1369, 1379-80 (Fed. Cir. 2001). “[W]hile it is true that claims are to be interpreted *in light of* the specification and with a view to ascertaining the invention, it does not follow that limitations from the specification may be read into the claims[,]” *Sjolund v. Musland*, 847 F.2d 1573, 1581 (Fed. Cir. 1988) (emphasis in original), “[n]or should particular embodiments in the specification be read into the claims; the general rule is that the claims of a patent are not limited to the preferred embodiment.” *Cornell Univ. v. Hewlett-Packard Co.*, 313 F. Supp. 2d 114, 126 (N.D.N.Y. 2004) (Mordue, C.J.) (citing, *inter alia*, *Texas Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1204 (Fed. Cir. 2002)).

In addition to the claim terms themselves and the patent’s specification, a third category of relevant intrinsic evidence worthy of consideration is the history surrounding prosecution of the patent. That history, which is customarily though not always offered to assist a court in fulfilling its claim construction responsibilities, is generally comprised of the complete record of proceedings before the PTO including, significantly, any express representations made by the applicant regarding

the intended scope of the claims being made, and an examination of the prior art.³ *Vitronics*, 90 F.3d at 1582-83. Such evidence, which typically chronicles the dialogue between the inventor and the PTO leading up to the issuance of a patent and thus can act as a reliable indicator of any limitations or concessions on the part of the applicant, oftentimes proves highly instructive on the issue of claim construction. *Philips*, 415 F.3d at 1313 (“We cannot look at the ordinary meaning of the term . . . in a vacuum. Rather, we must look at the ordinary meaning in the context of the written description and the prosecution history.”) (quoting *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005)).

If analysis of the available intrinsic evidence resolves a perceived ambiguity in a disputed claim term, then the inquiry is ended. *Vitronics*, 90 F.3d at 1583. Where, on the other hand, there remains uncertainty regarding a claim after consideration of all intrinsic evidence, the court may then turn to examination of such available extrinsic sources as expert

³ In addition to prosecuting their two patent applications before the PTO, the inventors also applied for a European patent based upon the December 5, 1994 PTO application. That application resulted in the issuance of European Patent No. 0797529 on June 26, 2003. Statements made by the inventors while prosecuting their related European patent are potentially relevant to the issue of claim construction. See *Glaxo Group, Ltd. v. Ranbaxy Pharm., Inc.*, 626 F.3d 1333, 1337 (Fed. Cir. 2001); *Abbott Labs v. Sandoz, Inc.*, 566 F.3d 1282, 1290 (Fed. Cir. 2009); *Alloc, Inc. v. Int'l Trade Com'n.*, 342 F.3d 1361 (Fed Cir. 2003). *cert. denied*, 541 U.S. 1063, 124 S. Ct. 2390 (2004).

testimony, inventor testimony, dictionaries, and technical treatises and articles, for guidance in reconciling any conflicting intrinsic indicators. *Id.* at 1584. It should be noted, however, that extrinsic evidence may only be used to aid the court in understanding patent claims and cannot be relied upon to justify any departure from or contradiction of the actual claim language employed by the applicant. *Id.* To assist in resolving an ambiguity, in its discretion, a court may admit and rely on prior art, whether or not it is cited in the specification or file history. *Id.* at 1584-85. Prior art and dictionaries, as publicly accessible objective information, are for obvious reasons preferable to expert testimony as tools for resolving ambiguity. *Id.* at 1585; *see also Texas Digital Sys.*, 308 F.3d at 1202-03.

Ultimately, interpretation of the terms of a patent claim can only be determined with a full understanding of what the inventor actually invented and intended to encompass within the scope of his or her patent claims. *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). For this reason, when inventors distinguish their invention from prior art, that prior art is properly excluded from coverage of the patent's claims. *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 267 F. Supp. 2d 533, 543 (N.D. W.Va. 2003) (citing *SciMed Life Sys., Inc. v.*

Advanced Cardiovascular Sys., Inc., 242 F.3d 1337, 1343 (Fed. Cir. 2001)).

2. Expert Opinions

The parties have offered declarations from experts for the court's use in the claim construction exercise. In *Phillips*, the Federal Circuit approved of the limited use of extrinsic evidence, including expert testimony, to the extent it "can shed useful light on the relevant art." *Phillips*, 415 F.3d at 1318 (quoting *C.R. Bard, Inc. v U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)). In its decision in that case the court held that

extrinsic evidence in the form of expert testimony can be useful to a court for a variety of purposes, such as to provide background on the technology at issue, to explain how an invention works, to ensure that the court's understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning the pertinent field.

Phillips, 415 F.3d at 1318 (citing *Pitney Bowes*, 182 F.3d at 1308-09); *Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998)).

More recent cases from the Federal Circuit reinforce the court's position regarding reliance upon expert testimony to the extent it is found to be helpful. See, e.g., *Spansion, Inc. v. Int'l Trade Comm'n*, 629 F.3d 1331,

1345 (Fed. Cir. 2010); *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1324 (Fed. Cir. 2009); *Serio-US Indus., Inc. v. Plastic Recovery Technologies Corp.*, 459 F.3d 1311, 1319 (Fed. Cir. 2006); *Network Commerce, Inc. v. Microsoft Corp.*, 422 F.3d 1353, 1361 (Fed. Cir. 2005); see also *U.S. Phillips Corp. v. Iwasaki Elec. Co.*, No. 03CIV. 0172, 2006 WL 20504, at *1 (S.D.N.Y. Jan. 3, 2006); *Pass & Seymour, Inc. v. Hubbell Inc.*, No. 5:07-CV-00945, 2009 WL 7296903, at *8 (N.D.N.Y. Dec. 30, 2009) (Peebles, M.J.), *adopted as modified*, 2011 WL 32433 (N.D.N.Y. Jan. 5, 2011) (Mordue, C.J.).

As the Federal Circuit has warned, however, any expert opinions that are unsupported or inconsistent with the claims themselves, the written description, or the prosecution history, are not useful and accordingly should be discounted. *Phillips*, 415 F.3d at 1318-19. In the end, the decision of whether expert testimony is needed rests with the trial court's discretion. *Inpro II Licensing S.A.R.L. v. T-Mobile USA, Inc.*, 450 F.3d 1350, 1357 (Fed. Cir. 2006) (citing *Key Pharms.*, 161 F.3d at 716).

Mindful of these principles and the limited usefulness of expert testimony, I have considered the proffered expert opinions to the extent I have found them to be of assistance in understanding the prior art,

technology, and patent specifications.

3. Person Of Ordinary Skill In The Art

Before turning to the task of claim construction, I must determine the relevant prism through which the patents in suit should be viewed. The court's assigned task when addressing claim construction is to ascertain how a person of ordinary skill in the art would have understood the disputed claim terms at the time of the invention. *Markman*, 52 F.3d at 986. Accordingly, patent claims must be interpreted not through the eyes of the court, nor those of any proffered experts, but rather from the standpoint of a person skilled in the relevant art. *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1332 (Fed. Cir. 2001). In fashioning the hypothetical construct of that person of ordinary skill in the art, a court should consider the educational level of the inventor, the type of issues encountered in the art, the prior art solutions to problems experienced, the rapidity with which innovations are made in the subject area, the sophistication of the technology involved, and the educational level of workers in the field. *Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1347 (Fed. Cir. 2000) (citation omitted).

The parties appear to be in agreement concerning the definition of a

person of ordinary skill in the art. Having considered their submissions and found the position espoused by both to be reasonable, I recommend that a person of ordinary skill in the art in this instance be defined as “a person with an undergraduate degree in chemistry, materials science or a related field with at least three to five years of practical experience of a field in applied rubber technology.”

D. Construction of Disputed Terms

1. Primer

The first of the four terms in issue is “primer”. Plaintiff proposes that the term be construed as “a substance that enhances a bond.” Defendant counters with a more limited definition, interpreting the word to mean “a dilute generally single component solution of a non-adhesive silane coupling agent or non-adhesive reactive silane that is applied to a bonding surface in order to enhance bond strength.”

The term primer is introduced in the '335 patent at claim four, a dependent claim which recites “[t]he sealing element of claim 1 wherein said ionized interior surface is wetted with a primer prior to being bonded.”⁴ As can be seen, the claim itself does not identify a specific

⁴ The term “primer” is correspondingly referenced in claims 3 through 6 of the '939 Patent.

primer, nor does it discuss the contemplated composition of the primer.

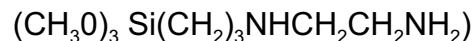
Claim 5 of the '335 Patent narrows the primer referenced in claim 4 as comprising "one of a silane coupling agent and a reactive silane."

Similarly, claim 5 of the '939 Patent restricts the primer referenced in claim 3 thereof as comprising "approximately a 1% solution of an aminosilane."⁵

The term primer is addressed in the specification of both patents in suit. The specification of the '335 Patent, for example, provides as follows:

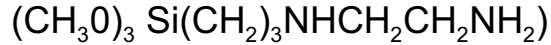
Optional surface treatments may be applied to the plastic after ionization of the surface, and before contact, in order to enhance the resulting bond. Examples of such surface treatments or primers include silane coupling agents and reactive silanes. The use of these materials to modify adhesive bonding is discussed in "Silane Coupling Agents" by E. P. Plueddemann, Q.D.412 S6P5 1982 ISBN 0-306-40957-7. However, this work covers the use of such agents in bonding of inorganic materials, such as glass fibers, in a matrix of thermoset or uncured resin. A preferred primer includes approximately 1/4-2% isopropanol solution of an aminosilane of formula:

⁵ Claim 6 further restricts that definition, providing the aminosilane specified in claim 5 "is selected from the group consisting of:



and

N-(2-aminoethyl)-3-aminopropyltrimethoxysilane."



Or

N-(2-aminoethyl)-3-aminopropyltrimethoxysilane

It is believed that the primer enhances the bond strength and increases the time allowed for bonding after ionization of the surface. Utilization of the primer is preferred when more than 1 hour will elapse between ionization of the plastic and contact with the activated surface of the elastomer.

It is believed that the silane occupies the reactive sites on the surface of the plastic and provides a more stable reactive species for later reaction with the surface of the activated elastomer.

'335 Patent, 3:39-65; see *also* '939 Patent, 3:31-56. As can be seen, the patent specification describes the intended function of the primer as enhancing the resulting bond and increasing the time allowed after ionization for bonding of the plastic or metal inner-surface of the cap. While a preferred primer is referenced, nothing within the specification reflects an intent on the part of the inventors to limit the composition of the primers referenced to the composition disclosed in the example.

Defendants' own expert acknowledges that the term primer generically can include many different types of compositions with varied numbers of components, depending upon the intended application. See Del Vecchio Decl. (Dkt. No. 45-3) ¶ 26; see *also* Mather Decl. (Dkt. No.

49-1) ¶ 24. In an effort to narrow this broad definition of primer in this instance, defendants point to language in the specification and the examples as suggesting an intent on the part of the inventors to restrict usage of the term to a dilute, single component substance.⁶ See Del Vecchio Decl. (Dkt. No. 45-3) ¶¶ 29, 36. Absent a clear showing of intent on the part of the inventors to cabin the term, however, reliance upon examples cited within a patent's specifications, or even a preferred embodiment, to limit a claim term is improper and should be rejected. *Cornell Univ.*, 313 F. Supp. 2d at 126.

Although defendants' proposed definition of the term "primer" is unduly narrow, by the same token consideration of the available intrinsic evidence, including the two patent specifications, reflect that plaintiff's proposed definition of the term "primer" is too broad and cannot withstand scrutiny. Like any other patent term, the word "primer" as utilized in the two patents in suit cannot be construed in a vacuum, but instead must be

⁶ The preferred primer disclosed in the specifications of the two patents consists of a single silane coupling agent. '335 Patent 3:48-55; '939 Patent 3:41-47. Similarly, the three examples cited in the specifications represent dilute, single component silane coupling agents. Del Vecchio Decl. (Dkt. No. 45-3) ¶ 30. Examples one and three cited in the two patents reference a primer consisting of a one percent solution N-(2-aminoethyl)-3-aminopropyltrimethoxysilane. *Id.* Example 2 describes utilization of a one percent solution of a single silane coupling agent. *Id.* No other primers are referenced in the specification of either patent in suit. *Id.*

considered in the light of the entirety of the patents. *Phillips*, 415 F.3d at 1313. Both patents note that “[t]he conventional method of attaching a liner or septum onto a cap utilizes some type of adhesive, which may come in contact with, and potentially contaminate, [a] sample.” ’335 Patent, 1:47-49; 939 Patent 1:51-53. The patents go on to identify “a need for a cap having an inert elastomer bonded directly to the interior of the cap without the use of adhesive or thin layers of plastic.” ’335 Patent, 2:30-32; 939 Patent, 2:26-28. This theme of avoiding potential contamination resulting from the use of adhesives is also prominently referenced during the prosecution history associated with the two patents. From this it seems clear that a proper construction of the term “primer” must exclude substances that can be characterized as adhesives.

Having carefully considered the competing definitions proposed by the parties and applied generally accepted principles of construction, I recommend that the term “primer” be construed as “a non-adhesive substance utilized as a surface treatment that enhances bond strength.”

2. Adhesive

Despite the fact that it is a widely used and generally understood term, the parties next disagree over the proper construction of the word

“adhesive” as utilized in the ’335 and ’939 Patents. Plaintiff urges the court to define that term as “a substance that bonds two or more solids so that they act or can be used as a single piece.” For their part, defendants suggest that the term be construed to mean “a multi-component gap filling mixture that is capable of bonding two surfaces.”

The two patents themselves provide little insight as to the intended meaning of “adhesive”, and whether in this context the definition should vary from the generally accepted understanding of the term. Claims 1, 6, and 30 of the ’335 Patent specifically exclude a layer of adhesive from coming between the elastomer’s bonding surface and interior surface of the sealable container cap discussed in the patent. Claim 1 of the ’939 Patent contains similar language. The specifications of the two patents provide no guidance, nor do they disclose any intent on the part of the inventors to deviate from the generally accepted meaning of the term.

Dictionary definitions of the term adhesive, though variously worded, are generally consistent in their application. One authoritative dictionary of scientific and technical terms defines the term as follows:

A substance used to bond two or more solids so that they act or can be used as a single piece; examples are resins, formaldehydes, glue, paste, cement, putty, and polyvinyl resin emulsions.

Hutton Decl. (Dkt. No. 46-1) Exh. L. (MCGRAW-HILL DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS 34 (4th ed. 1989)). Another often-cited source defines the term to mean, in relevant part,

[a]ny substance, inorganic or organic, natural or synthetic, that is capable of bonding other substances together by surface attachment.

Richard J. Lewis, Sr., HAWLEY'S CONDENSED CHEMICAL DICTIONARY 25 (15th ed.) .

SSP maintains, as it did with regard to the term “primer”, that resort to generally accepted broad definitions does not take into account the intent of the inventors, as disclosed in their patent. SSP notes, for example, that plaintiff's proposed definition does not allow for the need to differentiate between a primer and an adhesive and the potential for contamination associated with the latter, and additionally overlooks a definition of the term contained in the publication cited by the inventors in their patents.

It is true that plaintiff's patents cite *Silane Coupling Agents*, a publication authored by Edwin P. Plueddemann. See '335 Patent, 3:44-46; 939 Patent 3:36-38. The reference to that treatise, however, concerns the use of materials such as silane coupling agents and reactive silanes

as primers to enhance bondings.⁷ Nonetheless, defendants contend that because the two patents themselves cite the Plueddemann publication, it should also be looked to for a definition of “adhesive”. See Defendants’ Brief (Dkt. No. 45) Exh. D. That publication defines the term, in relevant part, as

a gap-filling polymer used to bond solid adherents such as metals, ceramics, or wood, whose solid surfaces cannot conform to one another on contact.

Id. at § 1.2.

The parties do not materially differ concerning the function to be performed by the adhesive referenced in the two patents in suit. Critical to the patents is the composition of the adhesive referenced, and the need to distinguish between potentially contaminating adhesives on the one hand, and primers on the other.⁸

As defendants’ expert notes, a person of ordinary skill in the art

⁷ According to defendants’ expert, silane coupling agents and reactive silanes, described in the patents as primers, are often used in adhesive formulations. Del Vecchio Decl. (Dkt. No. 45-3) ¶ 54.

⁸ It should be noted that a substance characterized by those of ordinary skill in the art as an adhesive may be capable of bonding certain surfaces, and yet incapable of forming a bond between others. See Second Del Vecchio Decl. (Dkt. No. 48-1) ¶ 25.

would know that adhesives commonly used in the rubber industry to bond an elastomer to a substrate are always mixtures of multiple ingredients which can include low molecular weight polymers, particulate reinforcing agents such as carbon black, specific reagents which will form chemical bonds, other types of chemicals that promote bonding, as well as miscellaneous materials and a solvent. Del Vecchio Decl. (Dkt. No. 45-3) ¶ 54. The patents in suit, however, do not provide any basis for limiting the term “adhesive” based upon chemical constituents.

Having considered the parties’ positions, I recommend that the term “adhesive” be defined as “a substance that is capable of bonding two or more solids together by surface attachment.”

3. Bond Directly/Directly Bonded

The parties next request construction of two related terms. The first is “directly bonded”, which is found in claims 1, 6, 8, and 20 of the ’335 Patent. The second is a slight variation of the first, “bond directly”, recited in claims 1 and 18 of the ’939 Patent. While the parties agree that the two phrases have the same meaning, they disagree concerning the appropriate construction. Plaintiff urges the court to construe the two terms as meaning that there can be “no layer of adhesive or plastic

material between bonded cap and septum”, while defendants assert that a proper construction involves “two surfaces which are joined to each other without the use of an intervening material.”

Determining the proper construction to be accorded to bond directly/directly bonded and, as will be seen, “layer” presents no easy task. Each party has proposed a construction which has something to commend it. Yet, both are potentially problematic.

Addressing first defendants’ proposed definition, which would eliminate the possibility of any material between the two surfaces to be bonded, I note that nothing in the specification of either patent precludes the presence of material between the two bonded surfaces other than an adhesive or plastic material. The plain focus of the two patents in suit was upon the potential contaminate effect of using an adhesive, and the invention disclosed surrounds the use of ionization for bonding in lieu of a potential contaminant. I also note that defendants’ proposed construction eliminates the possibility of the use of a primer, despite the fact that dependent claims within the two patents allow for the wetting of the ionized interior surface of the cap with a primer, which would clearly qualify as an intervening material. See, e.g., ’335 Patent Claims 4-7.

It is a well-accepted axiom of patent law that claim terms should be interpreted in such a way as to harmonize claims; constructions that are inconsistent with or exclude claims of the same or a related patent cannot be correct. *In re Katz Interactive Call Processing Patent Litigation*, – F.3d –, 2011 WL 607381, *14 (Fed. Cir. Feb. 18, 2011).

Plaintiff's proposed construction fares no better. Plaintiff merely proposes a definition that reiterates a concept spelled out in the phrase which following bond directly/directly bonded, namely "without the use of an intervening layer of adhesive or plastic material", but does not further illuminate what is meant by the concept of direct bonding. It is well established that constructions that would render other language within a claim superfluous or redundant are not generally favored. *Becton, Dickinson Co. v. Tyco Healthcare Group, LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010).

Having considered the intrinsic evidence, and in particular the specifications of the two patents in suit, I conclude that bond directly/directly bonded must be read hand-in-hand with layer, bearing in mind the intent of the inventors and the manner in which they went about distinguishing their invention from the prior art. While plaintiff's proposed

definition of the two, in combination, suggests that their could be the presence of some amount of adhesive between the two bonded surfaces, provided that it did not constitute a layer covering the entire surface, the patent specifications counsel otherwise. Those specifications focus upon the potential contaminating effect of any amount of contaminants. The '335 patent specification provides, for example, in relevant part as follows:

The conventional method of attaching a liner or septum onto a cap utilizes some type of adhesive, which may come in contact with, and potentially contaminate, the sample. In this regard it should be noted that even minor contamination may make critical analytical analysis of pollutants difficult or untrustworthy, since tests are commonly directed towards the presence of pollutants at the level of ppm (part per million) or even ppb (part per billion). Moreover, the EPA specification of a silicone rubber/Teflon septum presents further problems since many adhesives simply do not work well with silicone rubber. In addition, of those adhesives compatible with silicone rubber, many are thermoplastic adhesives which will not withstand common cleaning methods, such as those specified by the EPA cleaning standards.

'335 Patent 1:51-65; see *also* '939 Patent 1:47-61 (emphasis added).

From this it seems clear the patentees considered that their invention would not include any adhesive between the two bonded surfaces, and that this was the intent of the following qualifying language, referencing an

intervening “layer”.

Consistent with the patent claim terms and specifications, I conclude that “bond directly/directly bonded” should be construed to mean “joined together through surface contact, potentially with the presence of an intervening material”.

4. Layer

Hand-in-hand with the notion of direct bonding is claim language found in both patents in issue, providing that “there is no layer of adhesive or plastic material between [the two surfaces to be bonded].” See, e.g., ’335 Patent Claim 1; see *also* ’939 Patent Claim 1 (“without the use of an intervening layer of adhesive or plastic material.”) The parties have requested construction of the term “layer”. Their disagreement concerning this term centers over the extent to which a material must cover a surface in order to qualify as a layer.⁹ Plaintiff’s proposed definition provides that a layer constitutes an “adhesive or plastic material covering a surface.” Defendants counter that a layer should be construed as “a detectable

⁹ While the focus of the parties understandably is upon adhesives and plastic materials as referenced in claims of each of the two patents, usage of the term within the two patents, however, is not limited to those substances, and instead used elsewhere in the patents as relating to other types of compositions. See, e.g., ’939 Patent, Claim 20 (“a layer of silicone rubber and a layer of polytetrafluoroethylene”); ’335 Patent at 4:28 and Fig. 2 (“thin layer of Teflon”).

quantity/amount of a material that is at least partially distributed on a surface.”

It appears that the term layer, which is one of common usage, would not have any specific meaning to one of ordinary skill in the art in the context of the two patents. See Del Vecchio Decl. (Dkt. No. 43-5) ¶¶ 85-88. Similarly, the patents in suit do not provide guidance concerning the term or evidence any intent on the part of the inventors to deviate from the generally accepted meaning of the term, nor apparently do the prosecution histories associated with the two patents.

Although common dictionaries definition of the term “layer” vary somewhat, they are generally consistent. One source defines the term, in relevant part, to mean “a single thickness of a material covering a surface or forming an overlying part or segment.” THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE 994 (4th ed. 2000). Another sets forth the following definition: “a. one thickness, course or fold layer lying over or under another; b. Stratum.” MERRIAM-WEBSTER COLLEGIATE DICTIONARY 678 (9th ed. 1991) . Yet another dictionary definition of the term is “a single thickness of something, such as a covering or coating on a surface.” COLLINS ENGLISH DICTIONARY, <http://www.collinslanguage.com>

(site last visited April 4, 2011) (screen shot attached).

In this instance consideration of each of the patents as a whole convinces me that the inventors did not utilize the term layer in the traditional sense, in that they did not envision a substance spread over the entirety of the two bonded surfaces. The term cannot be construed in a vacuum; instead, its intended meaning can only be gleaned by looking not only to the concept of bond directly/directly bonded, but the invention itself as outlined in the specification. Here, it seems clear that the patentees distinguished their invention from the prior art by noting that there would not be a presence of any adhesive, a potential contaminant between the two bonded surfaces. As was previously noted, the specification clearly provides “that even minor contamination may make critical analytical analysis of pollutants difficult or untrustworthy, since tests are commonly directed towards the presence of pollutants at the level of ppm (part per million) or even ppb (part per billion).” ’335 Patent 1:54-58; ’939 Patent 1:50-54. The definition proposed by the defendants for the term “layer” is more consistent with this concept and fits better with bond directly/directly bonded, giving full meaning to the balance of the claims. Accordingly, I recommend that “layer” be construed as “a

detectable quantity of a material that is at least partially distributed on a surface.”

III. SUMMARY AND RECOMMENDATION

The two patents in suit involve relatively simply concepts, products and methods described in terms, many of which are readily understandable without the need for technical or expert assistance and further refinement. Having carefully considered the patents in suit, the arguments of the parties, and the relevant and available data to inform the court’s analysis, it is hereby respectfully

RECOMMENDED, that paragraphs 23, 26, 28, 33, 34, and 36 of the Declaration of Patrick T. Mather, Ph. D., dated January 28, 2011 be STRICKEN; and it is further

RECOMMENDED that the court affix the following meanings to the four claim terms in dispute.

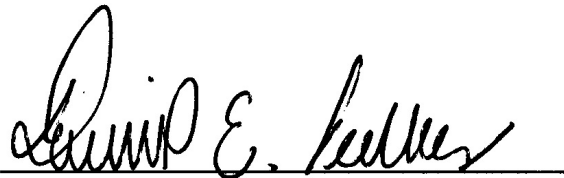
<u>Disputed Term</u>	<u>Proposed Construction</u>
primer	a non-adhesive substance utilized as a surface treatment that enhances bond strength
adhesive	a substance that is capable of bonding two or more solids together by surface attachment

bond directly/directly bonded layer	joined together through surface contact, potentially with the presence of an intervening material a detectable quantity of a material that is at least partially distributed on a surface.
--	---

NOTICE: Pursuant to 28 U.S.C. § 636(b)(1), the parties may lodge written objections to the foregoing report. Such objections must be filed with the clerk of the court within FOURTEEN days of service of this report.

FAILURE TO SO OBJECT TO THIS REPORT WILL PRECLUDE APPELLATE REVIEW. 28 U.S.C. § 636(b)(1); Fed. R. Civ. P. 6(a), 6(d), 72; *Roldan v. Racette*, 984 F.2d 85 (2d Cir. 1993).

It is hereby ORDERED that the clerk of the court serve a copy of this report and recommendation upon the parties in accordance with this court's local rules.



David E. Peebles
U.S. Magistrate Judge

Dated: April 7, 2011
Syracuse, NY

Collins

Collins Language.com

FREE Dictionary

Collins English Dictionary FREE

Account Login

Shopping Basket

Home | Dictionary & Language Products | Translation | Scrabble | My Account | ELT

CURRENCY

USD

Nearby words

lawsuit
lawyer
lax
laxative
lay
lay
lay
lay
lay aside
lay down
lay figure
lay in
lay into
lay off
lay on
lay out
lay reader
lay up
lay-by
layabout
layer
layette
layman
laywoman
laze
lazy
lazybones
lb
lbw
lc
LCD
LCM
lcm
LEA
lea
leach
lead
lead
lead off
lead on
lead pencil

Collins: English Dictionary Definition (Meaning) of

layer

N

1. a single thickness of something, such as a cover or a coating on a surface,

2. a laying hen,

3. (HORTICULTURE) a shoot that forms its own root while still attached to the parent plant,

VB

to form or make a layer or layers,
From lay¹

Collins English Dictionary Pro for Windows and Mac

Buy the Collins English Dictionary Pro download and get full access to the English Dictionary. Search over 500,000 English words, references and examples. Also includes 6,000 biographical entries:

• Latest vocabulary, based upon our 2.5 billion word database

• Key expressions and example sentences

• Cultural notes on life and language

Click here to buy the CED Pro or download a free ten day trial

FREE MONTHLY E-NEWSLETTER

Sign up to win a dictionary download!

Collins English Dictionary

Collins Spanish Dictionary

Collins Best Selling Dictionaries for iPhone & iPad

Definitions and translations at your fingertips

About Collins
Terms & Conditions
Privacy Policy
Licensing
Corporate Subscriptions
Affiliate
Press releases
Contact Us

Dictionary & Language Products
English
French
Spanish
German
Italian
Other Languages
English Learners (Cobuild)
Collins Dictionaries Online

Free Online Dictionary
English
Thesaurus
English-French
French-English
English-Spanish
Spanish-English
English-German
German-English
English-Italian
Italian-English
COBUILD English Learners

Help
Sitemap
Technical Support
Customer Service

Campaign
adopt a word
giving words a happy home

© 2011: HarperCollins Publishers Ltd | Dictionary database indexing and processing provided by Ultralingua, Inc. © 2011

http://www.collinslanguage.com/results.aspx?context=3&reversed=False&action=define&homonym=-1&text=layer[4/4/2011 9:09:55 AM]